

# Case Study

## Astro Tower

**Customer** Astro Tower

**Location** Brussels, Belgium

**Requirements** A first class future proof infrastructure system

**Equipment** Excel Category 6<sub>A</sub> cable, Category 6<sub>A</sub> keystone toolless jacks, OM3 Tight Buffered fibre, copper & fibre system accessories

### Customer's View

"The investment in this building and the sheer scale of this project demanded a product that could deliver a first class network. The Excel product range distributed by 4K throughout Belgium was chosen due to its ability to exceed performance levels and meet budgets."

*Werner Moens, Sales Manager, 4K Belgium*

**excel**  
without compromise.

The Astro Tower is a skyscraper in Brussels, Belgium and has taken a prominent place on the Brussels 'skyline' since 1974. It is located on the northeast corner of the small ring in the municipality of Saint-Josse-ten-Noode, just north of the Madou Plaza Tower. The Astro Tower is 107 metres (351 ft) tall, making it one of the tallest buildings in Belgium.

A major renovation to preserve the building's original morphology, while making it one of the most efficient buildings in the region took place over a number of years. Upon its completion in 2016 the renovated Astro tower became the tallest passive building in the Brussels region.

A new pixellated façade has been added which combines stainless steel and high performance glazing, with the upper technical floors assembled into a crown that gives the building a clear identity in the landscape.

The base, connecting the building with the surrounding area, has been reconfigured to provide a new entrance sequence and a more harmonious relationship with the neighbourhood.

The entire building is occupied by Actiris, the employment offices of the Brussels region.

### The Requirement

The level of investment made to renovate this building required a high end infrastructure solution which could meet the expectations of its new occupants. The whole building was to become home to numerous departments from one organisation all demanding high-speed access to the network.

### Sourcing a Partner

Founded in 1992 Channel Communication is a company active in the world of telecommunications and networks. Historically



they specialise in networks (LAN/WAN) and IP telephony.

Channel Communication offer a quality service and unique understanding based on 15 years of experience and more than 130 references across Europe.

Channel Communication worked closely with 4K. Established in 1993, 4K started out as a solution provider in passive components such as cabling, heat shrink tubes and connectors on the Belgian market. Nowadays 4K is considered a full-service company, well known amongst broadcasting, data networking and telecom as well as industrial market segments on the Belgian market and abroad for both its active and passive solutions.

4K prefers to develop long term business relationships and only works with selected partners who are authorities in their specific field, Channel Communication fitted this criteria and has worked with 4K for over 13 years.

4K themselves have been distributing the Excel product range for over 5 years as an official Excel Distribution Partner.

### The Right Product

Channel Communication needed to provide a solution which could meet the demands of its residents. They decided to go with the Excel Cabling Solution, which they knew could meet all necessary requirements.

Choosing the right solution is critical, as it no longer provides just the connectivity for an IT system, it is the foundation of a modern building management system (BMS). Making the right choice at this stage creates a future proof, high performance, flexible platform which supports efficiency and cost benefits.

The product portfolio from Excel constitutes an end-to-end solution where performance and ease of installation are prerequisites. With an emphasis on compatibility and standards compliance 'from cable to cabinet', reliability and product availability, Excel is the complete trusted solution.

Excel products are Delta verified. Excel has invested in such test and verification programmes for over 15 years, Third party verifications are seen as an independent tick in the box. As well as testing the component and channel, the manufacturing facilities are visited for spot checks to ensure the consistent quality in the manufacturing process.

### Design and Installation

Excel Category 6<sub>A</sub> cabling was chosen to form the basis of the solution. This cable takes the performance capabilities of copper infrastructure to new levels. The cable has been designed to exceed the ISO/IEC, TIA and CENELEC for Category 6, 6<sub>A</sub>/Augmented component requirements. This delivers Class EA/ Augmented Category 6 link performance over distances of up to 90 metres which supports the applications including 10GBASE-T, (10 Gigabit Ethernet). Lending itself to any high definition bandwidth hungry video footage requirements.

Each cable consists of two sets of two pairs which are wrapped



together in an "S" configuration with high quality, strong, aluminium/polyester foil tape providing screening for each pair. The "S" Foil configuration ensures separation of the pairs which promotes optimal performance whilst creating a reduced O/D construction.

10,000 Category 6<sub>A</sub> Low Profile Unscreened Keystone Jacks were installed in the re-fit. This keystone jack is a reduced size toolless termination RJ45 socket. The reduced size allows for multiple cable entry directions to be accommodated when this jack is mounted in a standard depth back box. This permits many mounting options including flush shutters at the outlet as well as a more common angled shutter used with keystone jacks. The socket is manufactured from high quality polymer with a die cast metallic "butterfly" style rear closing.

Finally Excel OM3 50/125µm tight buffered optical fibre cables were installed. These fibre cables have been designed specifically for internal and external applications. These compact, lightweight cables are extremely flexible and are quick and easy to install. The cables are constructed around swell able reinforced yarns as common strength members containing up to 24 colour coded 900µm tight buffered fibres.

The use of fibre gave some significant benefits in completing the job. The fibre was deployed to link the comms racks situated on each floor, together which in turn negated any issues with runs that would have been over length for a traditional copper link. Fibre optics allow for large amounts of bandwidth to be transmitted, so it was the ideal choice for the backbone when linking the racks together.

Fibre provides an extremely reliable backbone for data transmission back to the core, whilst also being immune to lots of interference, therefore with the cabling running close and next to other services within the building, such as elevator motors in risers, there are no issues with the data transfer.

Channel Communication had to work to a strict deadline for this project. Each of the 31 floors had to be completed and ready prior to staff occupying them. Some work did still need to take place once the staff had moved in, which required cooperation and understanding from all parties to ensure that the job was completed successfully.

Channel Communications have worked with 4K for 13 years.



### The Result

The Astro Tower is now providing its occupants with a fully future proofed infrastructure solution which gives users access to a fast efficient network no matter when they choose to use it.

The infrastructure solution installed delivers the levels of services visitors expect when they enter the modern, dramatic building.



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